Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of manufacturing an optical data storage medium to form at least one substrate having a plurality of layers deposited on the substrate, including at least one of a transparent spacer layer and a transparent cover layer, the method comprising acts of:

applying a liquid onto the rotating substrate by rotating the substrate further in order to spread out the liquid into a layer substantially uniformly between an inner radius r_i ~~offset from a center spindle hole~~ and an outer radius r_o, and exposing the liquid layer to UV radiation to solidify the liquid layer; and

heating the liquid layer by heating means in an area with a radius larger than the inner radius r_i in such a way that the temperature rise of the liquid layer at r_i has a value δT_{ri}

wherein while the temperature rise of the liquid layer between r_i and r_o gradually increases, the temperature rise of the liquid layer at r_o has a value $\delta T_{ro} > \delta T_{ri}$, and

wherein the temperature rise between r_i and r_o has a radial temperature profile with a shape substantially resembling the shape of a radial thickness profile resulting when $\delta T_{ro} > \delta T_{ri}$ are zero.

2. (Canceled)

3. (Previously presented) The method as claimed in claim 1, wherein the heating act is performed by heating means having an infra red heating device for projecting IR radiation onto the substrate in an area with a radius larger than r_i for causing a desired radial temperature profile in the liquid layer.

4. (Previously presented) The method as claimed in claim 3, wherein the heating means comprise a heated chuck on which the substrate is mounted during rotation, said chuck having a heated surface for causing a desired radial temperature profile in the liquid layer.

5. (Previously presented) The method as claimed in claim 1, wherein the heating means comprise a directed flow of heated gas emanating from a nozzle for causing a desired radial temperature profile in the liquid layer.

6. (Previously presented) The method as claimed in claim 1, wherein a few mm wide outer peripheral zone of the substrate is shielded by a mask in order to prevent exposure of the liquid layer in this zone to UV radiation.

7. (Previously presented) The method as claimed in claim 6, wherein after the exposure of the liquid layer in the exposed portion, the substrate is rotated at a higher rotation frequency than previously applied that is sufficiently high to substantially remove the non exposed liquid in the outer peripheral zone from the substrate.

8. (Previously presented) The method as claimed in claim 1, wherein the act of exposing is performed in an atmosphere containing oxygen and at an exposure intensity, the act of exposing further comprises an act of inhibiting oxygen for leaving a top portion of the liquid layer unsolidified.

9. (Withdrawn - currently amended) An optical data storage medium manufactured using the method of claim 8, wherein additionally:

[-] a stamper is pressed into the unsolidified top portion of the liquid layer,

[-] subsequently the top portion is solidified by exposure to radiation,

[-] the stamper is separated from the top portion of the completely solidified liquid layer,

[-] further layers are provided for finalization of the optical data storage medium.

10. (Withdrawn) An optical data storage medium according to claim 9, wherein the stamper is transparent to UV radiation and the top portion is solidified by UV radiation which is projected through the transparent stamper.

11. (Withdrawn - currently amended) An apparatus for performing the method of claim 1 comprising

[-] means for receiving a substrate and a plurality of layers deposited on the substrate,

[-] means for rotating the substrate,

[-] means for providing at least one of a transparent spacer layer and transparent cover layer, by applying a liquid onto the rotating substrate and rotating the substrate further in order to spread

out the liquid into a layer substantially uniformly between an inner radius r_i and an outer radius r_o, and

[-] means for heating the liquid layer after applying the liquid onto the rotating substrate in such a way that,

[*] the temperature rise of the liquid layer at r_i has a value δT_{ri} while,

[*] the temperature rise of the liquid layer between r_i and r_o gradually increases,

[*] the temperature rise of the liquid layer at r_o has a value $\delta T_{ro} > \delta T_{ri}$. , and

[-] means for solidifying the liquid layer by exposure to UV radiation directly after the heating step.

12. (Withdrawn) An apparatus as claimed in claim 11, wherein the means for heating comprise an infrared heating device projecting IR radiation onto the substrate in an area with a radius larger than r_i for causing a desired radial temperature profile in the liquid layer.

13. (Withdrawn) An apparatus as claimed in claim 11, wherein the means for heating comprise a heated chuck on which the substrate is mounted during rotation, said chuck having a heated surface for causing a desired radial temperature profile in the liquid layer.

14. (Withdrawn) An apparatus as claimed in claim 11, wherein the means for heating comprise a directed flow of heated gas emanating from a nozzle for causing a desired radial temperature profile in the liquid layer.

15. (Withdrawn) An apparatus as claimed in claim 11, wherein a mask for shielding a few mm wide outer peripherical zone of the substrate is present in order to prevent exposure of the liquid layer in this zone to UV radiation.

16. (Previously presented) The method as claimed in claim 1, wherein a thickness of the liquid following the heating of the liquid varies over an entire surface of the optical data storage medium in a range of +/- 1.0 μm.

17. (Previously presented) The method as claimed in claim 1, wherein a thickness of the liquid following the heating of the liquid varies over an entire surface of the optical data storage medium in a range of +/- 0.5 μm.

18. (Previously presented) The method as claimed in claim 1, wherein a thickness of the liquid following the heating of the liquid varies over an entire surface of the optical data storage medium in a range of +/- 0.2 μm.